



COMMONWEALTH of VIRGINIA

Douglas W. Domenech
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
www.deq.virginia.gov

David K. Paylor
Director

Robert J. Weld
Regional Director

Lynchburg Office
7705 Timberlake Road
Lynchburg, Virginia 24502
(434) 582-5120
Fax (434) 582-5125

Roanoke Office
3019 Peters Creek Road
Roanoke, Virginia 24019
(540) 562-6700
Fax (540) 562-6725

October DRAFT, 2011

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE STATIONARY SOURCE PERMIT TO OPERATE

This permit supersedes your minor New Source Review permit dated May 21, 1975, and amends and replaces your State Operating Permit dated July 17, 1998.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Department of Corrections
Mecklenburg Correctional Center
P.O. Box 500
Boydton, Virginia 23917
Registration No.: 30649

is authorized to operate

support facilities for a prison

located at

Boydton, Virginia

in accordance with the Conditions of this permit.

Approved on DRAFT .

Robert J. Weld,
Regional Director

Permit consists of 7 pages.
Permit Conditions 1 to 18.

INTRODUCTION

This permit approval is based on the new source permit application dated February 12, 1975, and the State Operating Permit applications dated March 28, 1998 and February 25, 2011 including additional information dated April 27, 2011 and August 4, 2011. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. **Equipment List** - Equipment at this facility consists of the following:

Equipment permitted prior to the date of this permit				
Reference No.	Equipment Description	Rated Capacity	Federal Requirements	Original Permit date
B-1, B-2, B-3	3 Cleaver-Brooks residual oil boilers	12MMBtu/hr	40CFR63, Subpart JJJJJ	May 21, 1975

Additional Equipment installed at the facility				
Reference No.	Equipment Description	Rated Capacity	Federal Requirements	Manufacture Date
1	Onan DYG-15R/1337D Generator	276 BHP / 150 kW	40CFR63, Subpart ZZZZ	1975
2	Onan 50-0 DEG-15R/2072H Generator	93 BHP / 50 kW	40CFR63, Subpart ZZZZ	1975
3	Generac 97A04175S Generator	134 BHP / 100 kW	40CFR63, Subpart ZZZZ	1975
4	Onan 50-0 DEG-15R/2072J Generator	93 BHP / 50 kW	40CFR63, Subpart ZZZZ	1977
5	Onan 50-0 DEG-15R/2072J Generator	93 BHP / 50 kW	40CFR63, Subpart ZZZZ	1977

Additional Equipment installed at the facility				
Reference No.	Equipment Description	Rated Capacity	Federal Requirements	Manufacture Date
6	Lima 2839-0-815 Generator	235 BHP / 175 kW	40CFR63, Subpart ZZZZ	1977
7	Onan 50DDB-15R/18814D Generator	85 BHP / 50 kW	40CFR63, Subpart ZZZZ	1978
8	Onan 75.0 DYC-15R/18926K Generator	162 BHP / 75 kW	40CFR63, Subpart ZZZZ	1978

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.

(9 VAC 5-80-1180.D.3. and 9 VAC 80-830)

- Boiler Emission Controls** - Emissions from the 3 Cleaver-Brooks boilers shall be controlled by proper operation and maintenance of combustion equipment. The permittee shall develop, maintain, and have available to all operators good written operating procedures and a maintenance schedule for the 3 Cleaver-Brooks boilers. These procedures shall be based on the manufacturer's recommendations, at a minimum.
(9 VAC 5-80-900)

OPERATING LIMITATIONS

- Boiler Fuel** - The approved fuel for the 3 Cleaver-Brooks boilers is residual oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)
- Generator Fuel** - The approved fuel for the supporting generators is low sulfur diesel fuel. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850)
- Boiler Fuel Throughput** - The 3 Cleaver-Brooks boilers shall consume a total of no more than 500,000 gallons of residual oil per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-850)
- Fuel Specifications** - The permitted fuels for facility equipment shall meet the specifications below:

RESIDUAL OIL which meets the ASTM D396 specifications for numbers 4, 5, or 6 fuel oil:
Maximum sulfur content by weight per shipment: 2.5 %

DIESEL FUEL which meets the ASTM D975 specification for Grades 1 or 2 diesel fuel:
Maximum sulfur content per shipment: 0.05%

(9 VAC 5-80-850 and 9 VAC 5-80-900)

7. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of residual oil and diesel fuel. Each fuel supplier certification shall include the following:
- a. The name of the fuel supplier;
 - b. The date on which the residual oil and diesel fuel was received;
 - c. The quantity of residual oil and diesel fuel delivered in the shipment;
 - d. A statement that the residual oil and diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D396 for Grades 4, 5, and 6 fuel oil, ASTM D396 for Grades 1 or 2 Low Sulfur fuel oil, ASTM D975 for Grades 1 or 2 Low Sulfur diesel fuel, or other DEQ approved fuel specifications);
 - e. The sulfur content of the residual oil and diesel fuel; and
 - f. The method used to determine the sulfur content of the residual oil and diesel fuel.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 6. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-80-850)

8. **Generator Operation** - The supporting generators are to be used for providing power at the location during interruption of service from the normal power supplier, to participate in the Emergency Load Response Program (ELRP) / Independent System Operator (ISO) load program, and for periodic testing.
(9 VAC 5-80-850)

EMISSION LIMITS

9. **Boiler Emission Limits** - Emissions from the operation of each Cleaver-Brooks boiler shall not exceed the limits specified below:

Particulate Matter (PM) (including condensable PM)	0.43 lbs/MMBtu
PM-10	0.43 lbs/MMBtu
Sulfur Dioxide	31.68 lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance

of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) 2, 3, 6 and 7.

(9 VAC 5-80-1180, 9 VAC 5-80-850 and 9 VAC 5-40-900)

10. **Facility-wide Boiler Emission Limits** - Total emissions from the operation of the three (3) Cleaver-Brooks boilers shall not exceed the limits specified below:

Sulfur Dioxide 99.1 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) 2, 3, 5, 6 and 7.

(9 VAC 5-80-850)

11. **Boiler Visible Emission Limit** - Visible emissions from each of the three (3) Cleaver-Brooks boilers shall not exceed 20 percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

(9 VAC 5-50-20, 9 VAC 5-50-80 and 9 VAC 5-80-850)

RECORDS

12. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:

- a. The monthly and annual throughput of residual oil. The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months;
- b. All fuel supplier certifications;
- c. The monthly and annual hours of operation for each support generator and reason for operation, including participation in the ELRP/ISO load program, documentation of a regional transmission organization-declared emergency, emergency operation, testing of a unit, and/or maintenance. The annual hours of operation shall be calculated monthly as the sum of each consecutive 12-month period by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-900)

GENERAL CONDITIONS

13. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
 - To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
 - To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
 - To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130 and 9 VAC 5-80-850)

14. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Blue Ridge Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Blue Ridge Regional Office in writing.

(9 VAC 5-20-180 C and 9 VAC 5-80-850)

15. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

(9 VAC 5-20-180 I and 9 VAC 5-80-850)

16. **Permit Suspension/Revocation** - This permit may be revoked if the permittee:

- Knowingly makes material misstatements in the permit application or any amendments to it;
- Fails to comply with the terms or conditions of this permit;
- Fails to comply with any emission standards applicable to a permitted emissions unit;

- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted;
- f. Fails to comply with the applicable provisions of Articles 6, 8 and 9 of 9 VAC 5 Chapter 80.
(9 VAC 5-80-1010)

17. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Blue Ridge Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-940)

18. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-860 D)